

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant : Adnan M. M. Mjalli  
Ser. No. : Unassigned (Divisional of Application No. 09/889,087)  
Fil. Date : Herewith  
For : A Method for Synthesis of Compounds of Formula I and Derivatives Thereof  
Group Art Unit : 1623  
Examiner : Leigh C. Maier

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Dear Sir or Madam:

Pursuant to Applicant's duty of disclosure under 37 C.F.R. §§1.56, 1.97 and 1.98, the documents listed on the attached Form PTO/SB/08A are being brought to the attention of the Examiner in charge of the captioned application. Copies of the documents listed on the attached Form PTO/SB/08A are not being submitted herewith, as copies of the documents were previously submitted to the US Patent and Trademark Office in the parent application number 09/889,087

The Examiner is respectfully requested to initial in the space adjacent to the listing of each documents on Form PTO/SB/08A, and return a copy of the initialed Form PTO/SB/98A with the next communication to Applicant, to confirm that these documents have been considered by the Examiner and made of record in this application.

**Certification Under § 1.97(b):**

The statement is being filed with the application. Accordingly, Applicant does not believe any fee is due. Please charge any additional fees to Deposit Account No. 16-1435.

The above information is presented so that the Patent and Trademark Office may, in the first instance, determine any materiality thereof to the claimed invention. See 37 C.F.R. §1.104(a) concerning the PTO duty to consider and use any such information. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the

Docket No. 46395/261072

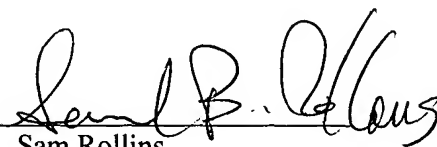
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references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

If the Examiner has any questions or wishes to discuss this application, kindly telephone the undersigned.

Respectfully submitted,

Date: June 26, 2003

By:   
Sam Rollins  
Reg. No. 52,180

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STATEMENT BY APPLICANT**

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**Complete if Known**

Application Number	Unassigned (Div. Of 09/889,087)
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First Named Inventor	Adnan M. M. Majalli
Group Art Unit	1623
Examiner Name	Leigh M. Maier
Attorney Docket Number	46395-261072

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**U.S. PATENT DOCUMENTS**

Examiner Initials *	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code <sup>2</sup> (if known)			
	1	US- 3,489,751 A	01-13-1970	Crast, L. B., Jr.	column 2, line 60 to column 7, line 60
	2	US- 3,634,418 A	01-11-1972	Willner, David	example 11
	3	US- 4,535,167	8-13-1985	Freidinger, et al.	
	4	US- 4,631,211	12-23-1986	Houghten, Richard A.	
	5	US- 4,757,153	7-12-198	Hansen, Jr. et al.	
	6	US- 5,280,093	1-18-1994	Jacquier, et al.	

**FOREIGN PATENT DOCUMENTS**

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		Office <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>2</sup> (if known)				
	7	DE	726 386 German w/English Abstract	C	IG FARBENINDUST RIE AG	10-13-42	examples 2 & 3; example 10; example 11, and from column 14, line 35 to column 25, line 25	
	8	DE	36 24 376 German/no English Abstract	A	KUNZ HORST PROF DR	01-28-88	page 5, lines 40-55	
	9	EP	0 779 076	A	YAROVA ELENA PETROVNA; DEIGIN VLADISLAV ISAKOVICH (RU)	06-18-97	page 10, lines 19-27	
	10	GB	867 572	A	CIBA LTD	05-10-61	page 6, first column, lines 13-55 and claims 8 and 15	

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		Examiner Name	Leigh M. Maier
		Attorney Docket Number	46395-261072
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OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
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	12	DATABASE CROSSFIRE BEILSTEIN 'Online! Beilstein Institut zur Förderung der Chemischen Wissenschaften, Frankfurt am Main, DE; retrieved from XFIRE Database accession no. 390975 XP002221919 *abstract* & RASSAT; REY: BULL. SOC. CHIM. FR., 1967, page 815	
	13	DATABASE CROSSFIRE BEILSTEIN 'Online! Beilstein Institut zur Förderung der Chemischen Wissenschaften, Frankfurt am Main, DE; retrieved from XFIRE Database accession no. 971962 XP002221920 *abstract* & PALACIN, SERGE; CHIN, DONOVAN ET AL.: J. AMER. CHEM. SOC., vol. 119, no. 49, 1997, pages 11807-11816	
	14	DATABASE CROSSFIRE BEILSTEIN 'Online! Beilstein Institut zur Förderung der Chemischen Wissenschaften, Frankfurt am Main, DE; retrieved from XFIRE Database accession no. 5998328 XP002221921 *abstract* & JACOBSEN, POUL; SCHAUMBURG, KJELT ET AL.: ACTA CHEM. SCAND. SER. B, vol. 34, no. 5, 1980, pages 319-326	
	15	DATABASE CROSSFIRE BEILSTEIN 'Online! Beilstein Institut zur Förderung der Chemischen Wissenschaften, Frankfurt am Main, DE; retrieved from XFIRE Database accession no. 2831711 XP002221922 *abstract* & TOSUNYAN ET AL.: ARM. KHIM. ZH., no. 30, 1977, page 785	
	16	DATABASE CROSSFIRE BEILSTEIN 'Online! Beilstein Institut zur Förderung der Chemischen Wissenschaften, Frankfurt am Main, DE; retrieved from XFIRE Database accession no. 1636432 XP002221923 *abstract* & LAVRADOR, KARINE; GUILLERM, DANIELLE ET AL.: BIOORG. MED. CHEM. LETT., vol. 8, no. 13, 1998, pages 1629-1634	
	17	DATABASE CROSSFIRE BEILSTEIN 'Online! Beilstein Institut zur Förderung der Chemischen Wissenschaften, Frankfurt am Main, DE; retrieved from XFIRE Database accession no. 7528593 XP002221924 *abstract* & ALLAN, ROBIN; DUKE, RUJEE; HAMBLEY, TREVOR ET AL.: AUST J. CHEM., vol. 49, no. 7, 1996, pages 785-792	
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		Examiner Name	Leigh M. Maier
		Attorney Docket Number	46395-261072
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19	DATABASE CROSSFIRE BEILSTEIN 'Online! Beilstein Institut zur Förderung der Chemischen Wissenschaften, Frankfurt am Main, DE; retrieved from XFIRE Database accession no. 2213919 XP002221926 *abstract* & TRIGALO, F.; BUISSON, D.; AZERAD, R.: TETRAHEDRON LETT., vol. 29, no. 47, 1988, pages 6109-6112	
20	DATABASE CROSSFIRE BEILSTEIN 'Online! Beilstein Institut zur Förderung der Chemischen Wissenschaften, Frankfurt am Main, DE; retrieved from XFIRE Database accession no. 2936549 XP002221927 *abstract* & HUDDLE; SKINNER: J. MED. CHEM., no. 14, 1971, page 545	
21	DATABASE CROSSFIRE BEILSTEIN 'Online! Beilstein Institut zur Förderung der Chemischen Wissenschaften, Frankfurt am Main, DE; retrieved from XFIRE Database accession no. rid. 7063065 XP002221928 *abstract* & PLATTNER ET AL.: HELV. CHIM. ACTA, no. 31, 1948, pages 852-858	
22	DATABASE CROSSFIRE BEILSTEIN 'Online! Beilstein Institut zur Förderung der Chemischen Wissenschaften, Frankfurt am Main, DE; retrieved from XFIRE Database accession no. rid. 7054614 XP002221929 *abstract* & SCHIFF: CHEM. BER., no. 18, 1885, page 490	
23	DATABASE CROSSFIRE BEILSTEIN 'Online! Beilstein Institut zur Förderung der Chemischen Wissenschaften, Frankfurt am Main, DE; retrieved from XFIRE Database accession no. rid. 7063059 XP002221930 *abstract* & VISCONTINI: HELV. CHIM. ACTA, no. 29, 1946, page 1496	
24	STRYER, LUBERT, "Biochemie", 1983, VIEWEG AND SOHN VERLAGSGESELLSCHAFT MBH, GERMANY XP002221913, pages 10-14; in particular table 2-1	
25	SIGNMA-ALDRICH CHEMIE GMBH, "Biochemical and reagents for life science research", 1999, SIGMA-ALDRICH CO. XP002221914, pages 90-95	
26	Supplementary Partial European Search Report for Application EP 00 90 8331 mailed January 9, 2003	
27	CAO, X. et al., "Synthesis of NH-acyl- $\alpha$ -aminoamides on rink resin: inhibitors of the hematopoietic protein tyrosine phosphatase " Bioorg. Med. Chem. Lett. Vol. 5, 1995, 2953-2958	
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28	DEMHARTER, A. et al. "Synthesis of Chiral 1,1' - Iminodicarboxylic Acid Derivatives from - $\alpha$ Amino Acids Aldehydes, Isocyanides, and Alcohols by the Diastereoselective Five-Center-Four-Component Reactron. Angew. Chem. Int. Ed. Engl. 35: 173-175 (1996)	
29	FAUST, "Geminal Benzotriazolyl Ethoxy derivatives-Efficient auxiliaries in the synthesis of unsaturated carbonyl compounds", J. Prakt. Chem., 1997, Vol. 339, p. 98-100	
30	GREENE, T.W., "Protection for the Amino Group" Protective Groups in Organic Synthesis, John Wiley & Sons, New York, NY, Chapter 7 (1981)	
31	KEATING, et al., "Molecular diversity via a convertible isocyanide in the Ugi four component condensation" J. Am. Chem. Soc. 1995, Vol. 117, 7842-7843	
31	KEATING, T.A. et al. "Postcondensation Modifications of Ugi Four-Component Products: 1-Isocyanocyclohexene as a convertible Isocyanide Mechanism of Conversion, Synthesis of Diverse Structures, and Demonstration of Resin Capture" J. Am. Chem. Soc. 1996, Vol. 118, p 2574-2583	
32	KITAGUCHI et al. "Enzymatic formation of an isopeptide bond involving the $\epsilon$ -amino group of lysine" Tetrahedron Lett., 1988, Vol. 29, pp. 5487-5488	
33	KUNZ, H. et al. "Carbohydrates as chiral templates: diastereoselective Ugi synthesis of (S) amino acids using o-acylated d-arabinopyranosylamine as the auxiliary" Tetrahedron . Lett., 1989, Vol. 30, pp. 4109-4110	
34	LINDERMAN, "Enhanced diastereoselectivity in the asymmetric Ugi reaction using a new convertible isonitrile" J. Org. Chem., 1999, Vol. 64, pp. 336-337	
35	MJALLI, et al., "Solid phase synthesis of pyrroles derived from a four component condensation" Tetrahedron Lett., 1996, Vol. 37, pp. 2943-2946	
36	SIGLMÜLLER et al. "Chiral ferrocenylalkylamines from (-)-menthone" Tetrahedron, 1986, Vol. 42, pp. 5931-5940	
37	UGI, I., Isonitrile Chemistry, p. 1, Academic Press, New York and London, 1971	
38	UGI, I., "From Isocyanides via four-component condensations to antibiotic syntheses" Angew Chem., Int. Ed. Engl., 1982, Vol. 21, pp. 810-819	
39	UGI, I., "Perspektiven von Multikomponentenreaktionen und deren Bibliotheken" J. Prakt. Chem., 1997, Vol. 339, p. 499-516	

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